

PARALLEL SPREAD SPECTRUM
COMMUNICATION SYSTEM AND METHOD

ABSTRACT OF THE DISCLOSURE

- 5 The invention involves a parallel spread spectrum ("PSS") technique of spreading orthogonal encoded data. In a preferred embodiment, a method and system for communicating data comprises encoding and spreading a data stream using a scheme employing orthogonal Walsh functions, and thereby segmenting the data stream into multiple bit data packets representing one of a number of true or inverted Walsh codes. The data stream is then
- 10 differentially encoded for either BPSK or QPSK modulation, and spread using a PN-sequence. The parallel spread data stream is modulated for transmission to a receiver. At the receiver, the data stream is recovered by computing a cross correlation between the digitized data stream and a programmed sequence. One of the benefits of the PSS techniques over conventional communication systems is that additional processing gain plus data forward error correction can
- 15 be simultaneously achieved.